

DIFFUSION WELDING METHOD, MANUFACTURING METHOD OF JOINING COMPONENT AND ENGINE VALVE, AND ENGINE VALVE MANUFACTURED THEREBY

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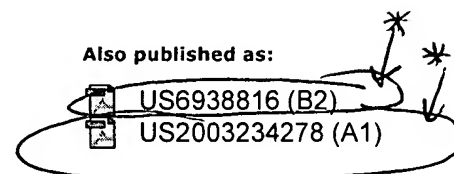
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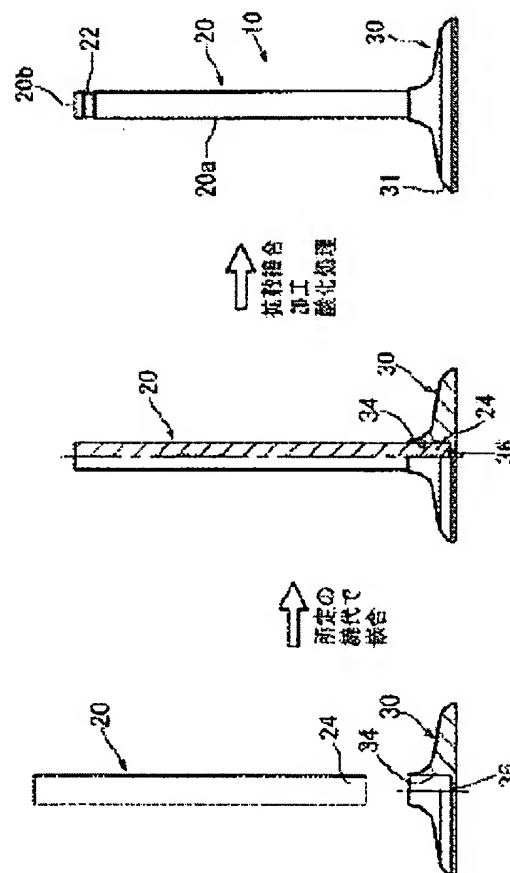
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Abstract of JP2004025198

PROBLEM TO BE SOLVED: To provide a diffusion welding method and a manufacturing method of a joining component and an engine valve that reduce the cost by improving processing efficiency, and also to provide the engine valve manufactured thereby.

SOLUTION: Either the valve shaft member 20 or the valve head member 30 is composed of a titanium based material. Also, one member is made of a material that can be diffusion-welded to the other member. Diffusion welding is performed by thermally treating, in a vacuum furnace, the welding projection (weld zone) 24 of the valve shaft member 20 and the welding recess (weld zone) 34 of the valve head member 30. In this case, the thermal treatment is carried out in a state where the welding projection 24 of the valve shaft member 20 and the welding recess 34 of the valve head member 30 are fitted to each other with a prescribed interference. Thus, the engine valve (joining component) 10 is manufactured.

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